

SOME AMERICAN SYRPHIDAE (DIPTERA).

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A number of species of Syrphidae of various genera from North, Central and South American countries are here described.

Chrysogaster ithaca, new species.

The present species is of special interest as it is our first eastern United States form belonging to a group of Pacific Coast species, the original members of which were described under the genus *Chilosia*. It bears a strong superficial resemblance to *Chilosia comosa* Loew.

Male.—Head large, broader than high; ocellar triangle slightly protuberant, black pilose; frontal triangle somewhat inflated with sparse black pile; antenna very small, brownish, above middle of head; arista equal to half the width of the face, measured across middle; face broad, but much higher than broad; with a small rugulose patch on each side and a small central tubercle; thoracic dorsum with fairly long, black pile, nearly erect, directed slightly backward; wings with yellowish brown tinge; apical crossvein directed outward, its extreme tip turned upward; petiole beyond first posterior cell but little longer than discal crossvein; penultimate section of fifth vein straight; petiole beyond anal cell noticeably shorter than in *nigripes*, evanescent at tip; squamae smoky, halteres yellowish; outer styles broad.

Type-locality.—Ithaca, New York, June (R. C. Shannon).

Type.—Cat. No. 27815, U. S. N. M.

C. nigripes differs by having the antennae placed at middle of head; a much larger frontal triangle; longer petioles beyond first posterior and anal cells; and the penultimate section of fifth vein distinctly bowed downward. *C. versipellis* has the face and frontal triangle more sharply convergent above; the frontal triangle distinctly smaller; outer styles much narrower.

Chrysogaster neotropica, new species.

Belongs to *nitida* group: first two tarsal joints bright yellow; antennae elongate; apical crossvein rectangular; stigma about as long as distance between the tips of second and third vein; mesonotum coppery vittate.

Female.—Linear markings of eye extremely labyrinthine; transverse marking nearly obsolete; antennae reddish yellow, moderately elongate, not as long as width of face at antennal base; first joint very short; second subequal to third; six mesonotal stripes, the lateral ones inconspicuous; scutellum subquadrate; legs bluish black with bases and apices of tibiae and the two basal tarsal joints yellow (three on hind tarsus); abdomen broad and flat, the disc subopaque; wings hyaline with dark spots as follows: just beyond middle of marginal cell; at tip of second vein and extending across to tip and along the apical crossvein at tip of submarginal cell; on discal and posterior crossveins and middle of discal cell. Length, 5 mm., wing, 3.75 mm.

Type-locality.—San Bernardino, Paraguay (K. Fieber).

Type.—Cat. No. 27814, U. S. N. M.

Tribe MYIOLEPTINI, *sensu stricto*.

The genus *Myiolepta* Newman (1838) was established for *Musca luteola* Gmelin, a European species. Twelve American species have been described under the name *Myiolepta*.

The writer, in his revised key to the American genera of Syrphidae (1921) erected the genus *Eumyiolepta* for *Myiolepta strigilata* Loew. In a later paper (1922) he called attention to the fact that *Lepidostola* Mik. (1886) was a member of the Myioleptini (previously associated with *Chrysogaster*) and gave a key to the three genera of the tribe.

Another species has come to hand which typifies a fourth genus of Myioleptini.

KEY TO THE GENERA OF MYIOLEPTINI.

- A1. Face concave or flat, with tubercle in male; metasternum membranous behind.
- B1. Body pile normal, composed of small hairs.....*Myiolepta* Newman.
- B2. Body pile modified, scale-like.
- C1. Antenna moderate, second and third joints as broad as long.....
Eumyiolepta Shannon.
- C2. Antenna much elongated, second and third joints much longer than broad*Lepidostola* Mik.
- A2. Face with strong carina; metasternum girdled with a chitinous band; thorax without tomentum.....*Zonemyia*, new genus.

Probably all of the tropical species described under *Myiolepta* will be found to belong to genera other than *Myiolepta*, *sensu stricto*.

Lepidostola has also been recorded under *Lepidomyia decessum* Hutton by Miller (Trans. New Zealand Institute, LIII, 294, 1921), from New Zealand. The writer has seen specimens of this species in Mr. W. M. Davidson's collection. It belongs to the genus *Psilota*.

***Lepidostola jenningsi*, new species.**

A remarkable species, peculiarized by the thorn-shaped scutellum.

Male.—Head flat in appearance, not much broader than high; ocellar triangle small, strongly protuberant, shining black; frontal triangle pollinose at apex, and lower corners shining black and bare above antennae; face broad, narrowing a little below, flat in profile with small median tubercle, mainly shining black through middle, densely pollinose on sides; antenna yellowish brown, slender, very elongate, nearly equal to height of head, first joint more than twice as long as broad, subequal to second, the third longer than first two together; arista much shorter than third joint; mesonotum with very short black pile on disc with scattered yellow scales intermixed; anterior margin of mesonotum with broad band of yellow tomentum; band of yellow tomentum behind transverse

suture broadly interrupted in middle; posterior margin with yellow tomentose band which extends forward on sides nearly to suture; scutellum with short stiff yellowish and black hairs, produced behind to a sharp point, in general appearance like that of a very stout thorn, or a nearly equilateral triangle; pleurae shining black with a very few widely scattered whitish scales; femora stout, strongly spinose below, black with the bases sharply yellowed, apices briefly yellow; tibia black with yellow bases; tarsi yellow, last two joints in all cases black; second and third abdominal tergites subopaque black with shining metallic lateral margins and the third with broad band of dark metallic coloration; fourth tergite shining bronze with scattered white scales; wings hyaline; discal crossvein near base of discal cell; first posterior cell with very short petiole beyond; spurious vein absent; squamae white, halteres yellowish. Length, 6.5 mm., wing, 5 mm.

Type-locality.—Canal Zone, Panama (A. H. Jennings).

Type.—Cat. No. 27856, U. S. N. M.

The specimen was evidently reared as the pin also bears three puparia. No rearing data is available, however. Mr. C. T. Greene states that the puparia greatly resemble the *Myiolepta* type which is added proof of the relationship of *Lepidostola* to *Myiolepta*. The head greatly resembles that of the *Chrysogasterae* as claimed by Williston, but this seemingly is a coincidence.

ZONEMYIA, new genus.

Face with a deep cavity below antennae, which is directly raised to a strong keel which continues to oral margin; thorax without tomentum, the usual pile extremely reduced, apparently absent; anterior margin of mesonotum armed with a transverse row of short, stout black spines (always?); metasternum with a band of chitin extending clear across its posterior surface.

Genotype.—*Zonemyia spinosa*, new species.

Zonemyia spinosa, new species.

Male.—Head very broadly elliptical; ocellar triangle very large, blackish in vicinity of the ocelli but yellowish pollinose before and behind; eyes narrowly separated; frontal triangle and face, except carina and jowls, densely golden pollinose; face with fairly deep but short concavity below antennae then raised to a strong straight keel which extends to oral margin; upper posterior rim of head armed with short stout black spines; mesonotum black with numerous minute hair tubercles bearing minute hairs; three golden pollinose transverse stripes, the anterior pair placed before middle of thorax, interrupted in middle; posterior one in front of scutellum; a row of short stout spines along anterior margin of first transverse stripe; the second one extending well onto the pleurae; scutellum yellow pollinose; fore and mid femora slightly swollen, the anterior pair simple, mid pair with few small ventral spines; hind femur much swollen, spinose on ventral surface; tibiae reddish brown, fore pair darkened apically; fore tarsi enlarged (as in *Temnostoma* and *Sphecomyia pattoni*) black; mid and hind tarsi normal, yellowish; abdomen very insignificantly pilose; constricted at second and third segments, second tergite with pair of shining brassy spots;

third and fourth tergites brassy on sides, subopaque medianly, with pale short pile; wings smoky; petiole beyond first posterior cell nearly as long as discal crossvein; apical crossvein angulated. Length, 7.75 mm., wing 5.5 mm.

Female.—Front variegated golden and blackish pollinose, at vertex equal to length of third joint; at antennal base slightly longer than length of antennae.

Type-locality.—Trinidad River, Panama.

Type.—Cat. No. 27828, U. S. N. M.

Holotype male and allotype female, June 2, 1911 (A. Busck).

Another male specimen, Trinidad River, Panama, June 5, 1911 (A. Busck) differs a little in color from the above. The scutellum has very little trace of golden pollinosity and the second tergite has a pair of elongate yellow spots.

Myiolepta transversa Hine evidently belongs to *Zonemyia*. It differs from *spinosa* principally in having patches of dense golden tomentum on the abdomen.

Genus **QUICHUANA** Knab.

Quichana Knab, Ins. Ins. Mens, I, 13, 1913.

Two species were included in this genus at the time of its erection: *sylvicola* Knab, genotype, and *picadoi* Knab and Knab further stated that *Mallota championi* Williston probably belonged here, too. Two additional species are at hand and a synoptic key is given for the group.

- A1. Arista much shorter than antenna; hind margins of second and third tergites yellow. (Peru).....*inca*, new species.
- A2. Arista as long as antenna; abdomen not bicolored.
- B1. Abdomen shining metallic bronze. (Mexico).....*championi* Williston.
- B2. Abdomen shining black.
- C1. Anterior margin of wing distinctly infuscated; no stigmatic crossvein. (Panama).....*calathea*, new species.
- C2. Anterior margin of the wing hyaline or nearly so; stigmatal crossvein present.
- D1. Face broader than length of arista. (Peru) ...*sylvicola* Knab.
- D2. Face a little narrower than length of arista. (Costa Rica).....*picadoi* Knab.

Quichana inca, new species.

Male.—Head broadly elliptical; ocellar triangle normal with rather long black pile; eyes contiguous; frons rather large with long black pile and with short yellow pile along eye margins; antenna elongate, slender, much longer than arista and width of face; second joint twice as long as first and nearly as long as second; face shining black with four narrow pollinose stripes extending down from antennae, the lateral ones extending to eye margins, the median ones to oral margin and thence to eye margin and turning upwards along the eye margins they meet the lateral stripes, thus forming an elongate pear-shaped outline; facial pile fairly long, pale; mesonotum dark, a pair of pale pollinose stripes, fading posteriorly; pile short and yellowish with longer black hairs intermixed; scutellum brownish, crescent-shaped, nearly three times as broad as long; femora

black, reddish brown apically; tibiae and tarsi reddish brown; hind femora greatly enlarged; abdomen chiefly black, narrow, slightly constricted subbasally; first tergite with matted yellow hairs; second and third tergites bordered behind with yellow pollinosity; wings infuscated anteriorly; stigmatal crossveins present; squamae darkly tinged, cilia brownish; halteres reddish brown. Length, 9 mm., wing, 7 mm.

Type-locality.—Huascaray, Peru. One male September 21 (C. H. T. Townsend).

Type.—Cat. No. 27829, U. S. N. M.

Quichana calathea, new species.

Male.—Orbits with yellow pile; ocellar triangle black pilose; frons with coarse bright yellow pile; antenna moderately elongate, slightly shorter than arista, third joint nearly as long as first two combined; arista longer than width of face; face whitish pollinose with fairly dense whitish pile; mesonotum dark with four whitish stripes; pile yellow, fairly long, a dense patch of yellow pile on notopleura which extends onto mesopleura; legs blackish to reddish brown; hind femur moderately enlarged; abdomen entirely shining black, broadest basally; clothed with yellow pile, mat-like on first tergite; wings with a large white spot apically, strongly infuscated anteriorly and basad of the white spot; stigmatal crossvein absent. Length: 10 mm., wing, 8.5 mm.

Female.—Front rather narrow; pile everywhere darker, apex of wing usually without white spot.

Type-locality.—Porto Bello, Panama.

Type.—Cat. No. 27830, U. S. N. M.

Ten specimens were reared from the water and material in the flower bracts of a large species of *Calathea*, August 28, 1923 (R. C. Shannon).

Mixogaster rarior, new species.

Male.—Head broader than its height by nearly the width of an eye, broadly elliptical; eyes widely separated, the front slightly widening upwards; distinctly longer than broad; a transverse impression midway of ocelli and antennae; a yellow spot behind ocelli and a yellow transverse stripe below ocelli; antennae dark brown, shorter than length of face; first joint as long as following two, the second about one-third of first; first joint slender, following two thickened; arista paler, a little longer than third joint; face bright yellow, clothed with scattered pile; nearly three times as high as broad, straight in profile with gentle slopes; a small shining black tubercle a short distance below antennae; dorsum of thorax dark brown bordered completely, except on anterior margin between humeri, by a yellow stripe which includes scutellum; pleurae yellowish; legs dark reddish brown, bases of tibiae yellow; abdomen greatly constricted basally, the third and fourth segments of normal width, dark reddish brown color, paler on basal two-thirds and post margin of second and post margin of third tergites; wings infuscated anteriorly; a spur extending upwards from tip of fifth vein into first posterior cell; apical crossvein twice angulated, and with spurs at each angle also at the base of apical crossvein (four spurs in all). Length, 9 mm., wing, 6 mm.

Female.—Front and vertex subquadrate, a little longer than broad; length, 11 mm., wing, 9.5 mm.

Type-locality.—Taboga Island, Panama.

Type.—Cat. No. 27831, U. S. N. M.

Holotype male, paratype male, February 23; allotype female, February 26, 1924 (A. Busck).

Mixogaster dimidiata Giglis-Tos (Mexico) is apparently the closest related species to the above but it is distinguished by its extraordinary arcuate face. *M. mexicana* also is closely allied. It may be distinguished by its yellow antennae and lack of yellow lateral mesonotal border.

***Mixogaster rarior rarissimus*, new variety.**

Male.—Differs from the male of the above by its larger size, 11 mm., vertex behind ocelli uniformly reddish brown; a median brownish stripe extending from oral margin to faint tubercle below antennae; only the spur at the tip of the fifth vein present.

Type-locality.—Cacao Trece Aguas, Alta Vera Paz, Guatemala, March 28, 1906 (Schwarz & Barber).

Type.—Cat. No. 27832, U. S. N. M.

***Microdon micromidas*, new species.**

Female.—Small species of a general yellowish appearance. Head as broad as high; ocellar triangle protuberant; front black, with scant bright yellow appressed pile; front narrowed somewhat above; antennae yellowish brown, shorter than face, first joint twice as long as broad, the second much smaller than the first, the third nearly three times as long as first; face yellowish, narrowing below, evenly clothed with bright yellow pile; dorsum of thorax noticeably smaller than frontal aspect of head, brassy black, with golden pile; pleurae dark with yellow pile; legs bright yellow, the hind legs with the apical half and first two tarsal joints black and with black pile; abdomen yellow with diffuse dark markings at the middle, clothed with yellow pile; wings with a distinct yellowish tinge, darkened apically.

Type-locality.—Taboga Island, Panama, February 21, 1911 (A. Busck).

Type.—Cat. No. 27833, U. S. N. M.

This species is closely related to *Microdon wheeleri* Mann which differs by having the first antennal joint as long as the third; a broad median stripe of the face shining and bare; dorsum of thorax larger than frontal aspect of head and nearly entirely yellow in color with a transverse band of black pile behind suture; legs entirely yellow (apical half of hind tibia and tarsi with black pile).

Micromidas shows several strong points of relationship with *Microdon* (*Masarygus*) *megacephalus* chiefly in the large head and small thorax and color and pilosity of the hind legs. Perhaps the three species discussed here will eventually be shown to be a closely related group.